

Claims:

1. A lead-free solder consisting essentially of 7.0-10.0 wt% of Zn, 0.1-4.0 wt% of Ag, 0.01-0.5 wt% of Al, and the balance of Sn.

5        2. The solder as claimed in Claim 1 further comprising 0.1-4.0 wt% of Ga.

3. The solder as claimed in Claim 1 further comprising 0.25-0.5 wt% of Ga.

10       4. The solder as claimed in Claim 1, which comprises 0.25-0.5 wt% of Ag.

15       5. The solder as claimed in Claim 2, which comprises 0.25-0.5 wt% of Ag.

6. The solder as claimed in Claim 3, which comprises 0.25-0.5 wt% of Ag.

20       7. In an improved lead-free solder having Zn, Ag, and more than 75 wt% of Sn, the improvement comprising said solder further including 0.01-0.5 wt% of Al.

8. The solder as claimed in Claim 7 further including 0.1-4.0 wt% of Ga.

25       9. The solder as claimed in Claim 7 further including 0.25-0.5 wt% of Ga.